

REMARKS

This paper is filed in response to the outstanding office action mailed October 9, 2007. Presently, claims 7-14 remain in the application. Reconsideration of the application is requested in view of the above amendments, the attached replacement sheet of drawing and the following remarks.

OBJECTION TO DRAWING

An objection has been raised with respect to the drawings, requesting further annotation of features shown in the figure (as described in the specification). Applicants attach hereto a revised sheet of drawing which conforms to the request. Specifically, text labels have been added to numerous elements that are already annotated with reference numbers. Removal of the objection is requested.

REJECTIONS UNDER 35 USC § 102

All of the pending claims have been rejected under Section 102 based on U.S. 6,990,513 (Belfiore). Applicants respectfully request allowance of the present application in view of the foregoing amendments and the following remarks.

As recited in claim 1, a feature of an embodiment of the invention is that unexpanded types and elements are accepted and unchanged into schemata characterized by a newer version relative to types and elements used in schemata characterized by an older version. This overcomes a prior art downward compatibility problem which is now described.

In the past, names of data of newer schemas have been different than names of corresponding data of older schemas. Even so, upward compatibility has been possible because both the old and new names of data can be made known to newer versions of applications. Via the type derivation relationship, the newer version can interpret both the old and the new data, rendering the newer schema upward-compatible.

On the other hand, downward compatibility has been lacking. This is because, when the names of data have changed between older and newer versions, older versions cannot interpret new data, i.e., because the new names are not known to the old versions of the applications. Consequently, it was only possible to use cross versions of documents with a converter which

changes the older version into a correct-compatible newer version. However, the disadvantage of using a converter to overcome downward-compatibility issues is that, because nothing can be done with the new data alone, the converter is always needed.

The prior art Belfiore reference is consistent with the foregoing summary of the prior art, and actually does not relate to the invention, e.g., providing compatibility between new and old versions of a schema that are used for defining structures of object and/or data models. As described at col. 12, lines 34 – 46, the Belfiore reference addresses a situation wherein a user desires to use data from multiple applications and data sources to create, for example, reports, and wherein the data associated with the different sources is found in completely different formats. The reference goes on to state at col. 12, lines 55 -57 that a universal schema is probably not realistic due to legacy and cross platform issues. So, the reference suggests provision of “core schemas” which address things that most applications will have in common. However, the reference does not render the different applications intercompatible but, rather, acknowledges that differences remain. From the foregoing it is apparent that the prior art reference is concerned with ability to use data from different applications. As indicated at col. 13, lines 1-32, several types of core schemas are provided, including, for example, business types which include products, accounts, customers, et al.

A distinction between this disclosure and the claimed invention is apparent from the description at col. 14, line 66 through col. 15, line 5, which illustrates a “schema store 290” which “returns the data in an XML representation of another schema.” See col. 15, lines 1-2. At col. 15, lines 2-4 the reference describes the use of a schema mapping service in conjunction with a schema adaptor service. Thus, by all appearances, the “schema” of the Belfiore reference requires using a converter to overcome incompatibility issues.

Another difference which further distinguishes the invention from the reference is that the reference appears concerned with using converter type functions to overcome incompatibility issues between different applications, while the invention removes incompatibility issues between different versions of a schema. Thus the invention is directed to different subject matter and the prior art does not suggest the teachings of applicants for providing compatibility between new and old versions of a schema.

The claims have been amended to more clearly recite the features which distinguish over the Belfiore reference. As noted in claim 7, the method for characterizing both an old version

and a new version of a schema enables both the new and the old schema versions to be both upward compatible and downward compatible. Thus one version can be compatible with data of a different version. The prior art does not deal with intercompatibility of data between different schema and certainly not between different versions of the same schema. Similar distinctions are found in the system of claim 11 wherein, for both a new and an old version of a schema, there is the combination of

“a first attribute ... for identification of the version of the schema, ... [wherein]
a namespace ... and type names and element names ... are preserved ...”

and the system includes

“mechanisms for expansion of the types and elements used in the old version, while preserving the respective type names or element names used in the old version, and for accepting without change into the new version unexpanded types or elements used in the old version, the foregoing combination enabling the old version of the schema to interpret data structures of the new version of the schema, and thereby providing downward compatibility between the new and old versions.”

The rejection cites col. 22 lines 28-37 of Belfiore which, if taken out of context, might appear to relate to the claimed invention. In fact, the disclosure of “backward compatible versioning” is only discussed in the context of Events, as more fully explained at cols 20 and 21 of the reference. In this regard, the reference remains deficient as to requiring (per claim 7)

“accepting without change unexpanded types and elements present in the old version of the schema into the new version of the schema so that the new and the old schema versions are both upward compatible and downward compatible.”

The Examiner’s citation of text at col. 42, line 65 ff does not seem to relate to the rejection and if further reliance is had, the Examiner is requested to clarify.

Applicants acknowledge that various components of the claimed combination may be found in the prior art. On the other hand, it is only the applicants who teach the combination and, at best, the prior art features of the Belfiore reference can only be pieced together in hindsight (and

out of context) to recreate the invention. The teachings are not there. For example, in an effort to “find” applicants’ requirement for accepting unexpanded types and elements “unchanged into schemata” (as recited in claim 7 as examined) citation is made to col. 14, lines 39-48. However, this disclosure does not appear to relate to anything more than the prior art practice of conversion by “providing shared mechanisms to recognize data and by transforming data in one schema to another schema.” See col. 14, lines 39-43. If the Belfiore reference taught the claimed subject matter there would be no need for such conversion.

In contrast to the claimed features, the Belfiore reference appears to acknowledge the need to use converters between applications and does not at all address the issue of downward compatibility between versions of a schema. On the other hand, applicants provide a method and a system which provide for downward compatibility and render reliance on a unnecessary. The function expressly addressed by the claims is not addressed by the prior art. It is submitted that the art of record is not sufficient to reject the claims under Section 102 or under Section 103.

Conclusion

For all of these reasons the claims are patentable over the prior art and the application is in condition for allowance. The Commissioner is hereby authorized to charge any appropriate fees due in connection with this paper, including the fees specified in 37 C.F.R. §§ 1.16 (c), 1.17(a)(1) and 1.20(d), or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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